

U.S.S.N. 09/591,739

Filed: June 12, 2000

RESPONSE TO OFFICE ACTION

Claims as Pending

36. A method for isolating a polyhydroxyalkanoate from a biomass derived from a transgenic plant comprising the polyhydroxyalkanoate, the method comprising:

- (a) treating the biomass, with at least one chemical or biochemical agent, to chemically derivatize the polyhydroxyalkanoate; and
- (b) separating the derivatized polyhydroxyalkanoate from the biomass.

37. The method of claim 36 wherein, in step (a), the biomass is treated with at least one chemical agent selected from the group consisting of acids, bases, detergents, oxidizing agents, chelating agents, reducing agents, nucleophilic reagents, electrophilic reagents, metal ions, aqueous solutions, and organic solutions.

38. The method of claim 36 wherein, in step (a), the polyhydroxyalkanoate is derivatized by a chemical transformation selected from the group consisting of an esterification, transesterification, hydrolysis, saponification, aminolysis, thiolysis, etherification, silylation, addition, elimination, rearrangement, and a condensation.

39. The method of claim 36 wherein the biochemical agent is an enzyme.

40. The method of claim 39 wherein the enzyme is selected from the group consisting of depolymerases, proteases, nucleases, lipases, cellulases, phosphorylases, and glycosidases.

41. The method of claim 36 wherein, in step (b), the derivatized polyhydroxyalkanoate is separated by a physical process selected from the group consisting of distillation, extraction, centrifugation, filtration, and chromatography.

42. The method of claim 36 wherein the transgenic plant is an oilseed plant.

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43. The method of claim 36 wherein the polyhydroxyalkanoate includes one or more units selected from the group consisting of a 3-hydroxyacid, a 4-hydroxyacid, and a 5-hydroxyacid.

44. The method of claim 36 wherein the biomass comprises plant parts selected from the group consisting of leaves, stems, seeds, and combinations thereof.

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